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AMSAT NEWS SERVICE
ANS-140

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor(a)amsat.org.

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*   AMSAT @ HAMVENTION May 18-20 - Booth (1007-1010 & 1107-1110)   *
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ANS-140 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 140.01
>From AMSAT HQ KENSINGTON, MD.
May 20, 2018
To All RADIO AMATEURS
BID: $ANS-140.01

AMSAT Activities at Hamvention 2018

At deadline, Hamvention 2018 was nearly over. If you are attending, and have somehow put it off, the AMSAT booth (1007-1010 & 1107-1110) will be open until noon local time on Sunday. Well-dressed satellite operators can still pick up the latest AMSAT fashions for 2018 as well as other AM-swag. The 2018 update of Gould Smith’s book, Getting Started With Amateur Satellites will be available as well.

[ANS thanks the AMSAT Office for the above information]

Work the AMSAT Hamvention Demo Station!

Hamvention 2018 is almost over, but there is still time to work

W3ZM/8, the AMSAT Club Station. Listen for the station on passes from 1200-1600 UTC Sunday, May 21st. Hamvention is located in the six character gridsquare EM89aq and if you are attending, the demo station is outside Building 1. As a reward for working the AMSAT demo station, individuals working us will receive a digital certificate upon request. Please email n8hm(a)amsat.org with your QSO details to receive a certificate.

[ANS thanks Paul N8HM for the above information]

Ready for Phase 5?

Phase 3 was the term coined for AMSAT's first high-earth orbit satellites back in the late 1970s[1], Phases 1 and 2 being the prior "bleepsats" and early transponder based LEO satellites (the very successful AO-6, AO-7, and AO-8 among them). Later, Phase 4 was coined to indicate satellites in geosynchronous orbits and Phase 5 to denote missions that would leave Earth's orbit. While AMSAT-NA doesn't currently have any Phase 5 missions planned, industrious students at China's Harbin Institute of Technology not only have a Lunar mission planned, but it is expected to launch on May 20 at 21:30 UTC!

Ambitious is a good description of the mission: not one, but two 47-kg microsats are expected to end up in an "HLO" -- a highly elliptical Lunar orbit -- and will be carrying amateur radio payloads. For more details and links to further information including a Linux-based "live CD" for using these satellites, see AMSAT-UK's news article here:

https://amsat-uk.org/2018/05/19/dslwp-satellites-lunar-orbit/

[ANS thanks AMSAT-UK for the above information]

[1] - AMSAT Newsletter, Vol VII, #2, June 1975, p3 - see http://www.ka9q.net/AMSAT-Newsletter-1975.pdf

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CAMSAT amateur radio transponder satellites to launch this year

CAMSAT has released details of three new amateur radio satellites, CAS-5A, CAS-5B and CAS-6, that are hoped to launch in September 2018. Two of the satellites CAS-5A and CAS-6 will carry transponders.

CAS-5A a 6U CubeSat which will include the following capabilities:

- HF/HF – H/T Mode Linear Transponder
- HF/UHF – H/U Mode Linear Transponder
- HF – CW Telemetry Beacon
- VHF/UHF – V/U Mode Linear Transponder
- VHF/UHF – V/U Mode FM Transponder
- UHF – CW Telemetry Beacon
- UHF – AX.25 4.8k/9.6k Baud GMSK Telemetry.

The transponders will have 30-kHz bandwidths except the H/U unit which will be 15 kHz wide. Planning a launch in September 2018 from the Jiuquan Satellite Launch Center into a 539 × 533 km, 97.5 degree orbit. Details: http://www.amsatuk.me.uk/iaru/formal_detail.php?serialnum=619

CAS-5B, a femto-satellite architecture (90 x 80 x 50 mm, 500 g mass)

with a proposed UHF CW beacon and to be deployed from CAS-5A when in space. Details:
http://www.amsatuk.me.uk/iaru/formal_detail.php?serialnum=620

CAS-6 a 50 kg micro satellite (490 x 499 x 430 mm). It will include:

• VHF CW Telemetry Beacon
• U/V Mode 20 kHz Linear Transponder
• AX.25 4.8k baud GMSK telemetry downlink
• Deployable Antennas
• Solar Panels, Lithium ion battery and power controller
• Integrated Housekeeping Unit
• Three-axis stabilization system
• Atmospheric Wind detector
• S-band TT&C system (non-amateur radio band)
• X-band Data link system (non-amateur radio band)

Planning a sea launch from the China Academy of Launch Vehicle Technology in September 2018 into a 579 x 579 km, 45 degree orbit. Details: http://www.amsatuk.me.uk/iaru/formal_detail.php?serialnum=622

[ANS thanks AMSAT-UK for the above information]

Call for Nominations - AMSAT Board of Directors

It's time to submit nominations for the upcoming AMSAT-NA Board of Directors election. Three directors' terms expire this year: those of Tom Clark, K3IO; Mark Hammond, N8MH; and Bruce Paige, KK5DO. In addition, up to two Alternates may be elected for one-year terms.

A valid nomination requires either one Member Society or five current individual members in good standing to nominate an AMSAT-NA member for Director. Written nominations, consisting of the nominee's name and call, and the nominating individuals' names, calls and individual signatures should be mailed to:

AMSAT-NA
10605 CONCORD ST STE 304
KENSINGTON MD 20895-2526

In addition to traditional submissions of written nominations, which is the preferred method, the intent to nominate someone may be made by electronic means. These include e-mail, fax, or electronic image of a petition. Electronic petitions should be sent to martha(a)amsat.org or faxed to +1-301-822-4371.

No matter what means is used, petitions MUST arrive at the AMSAT-NA office no later than June 15th. If the nomination is a traditional written nomination, no other action is required. If electronic means are used, a verifying traditional written petition MUST be received at the AMSAT-NA office within 7 days following the close of nominations on June 15th.

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS.

[ANS thanks the AMSAT Office for the above information]

ARISS News

Hamvention and ARISS Work Together

The Amateur Radio on the International Space Station team (ARISS) is happy to announce that Hamvention and ARISS are working together again this year. Hamvention's 2018 theme is, "Amateur Radio ... Serving the Community." ARISS serves communities by inspiring great numbers of youth to explore STEM and Amateur Radio.

ARISS is kicking off its 2018 fund-raising campaign at Hamvention to raise money for the expensive space-rated parts needed to finish building the required multiple units of the custom-built Multi-Voltage Power Supply, and to help defray some costs of continuing ARISS operations. The power supply is part of the next-gen ARISS Interoperable Radio System to replace the intermittent, aging ISS amateur radio station.

ARISS Chair Frank Bauer, KA3HDO, said, "Having Hamvention partner with ARISS really puts our 2018 funding campaign into gear."

Hamvention's support began with a post on the convention's front web page. The posting discussed teaming up with ARISS, and announcing a special ARISS prize drawing at the convention, and the need for hams to contribute to ARISS right now by going to http://www.ariss.org/donate.html, to https://fundrazr.com/arissnextgen, or stopping at the ARISS Hamvention booth on Sunday morning.

The double boost to ARISS by Hamvention is the featuring of the ARISS Challenge Coin at a special drawing just minutes before the convention's big prize drawings on the final day. Thousands of people will hear about the ARISS Challenge Coin and how ARISS inspires students to engage in STEM studies and radio technology.

2018 Hamvention Prize Committee Chairman Bill Serra, N8NRT, wrote, "We are happy to be able to make the ARISS Challenge Coin a very special part of Sunday's prize awards."

ARISS donated two of its handsome coins positioned side by side in a beautiful display, showing off each of the coin's sides. This ARISS Challenge Coin is the premium received by donors who give $100 or more to ARISS.

The ARISS team will welcome convention goers at the ARISS booth in Building 1 through the weekend to donate and see a mock-up of the Multi-Voltage Power Supply that ARISS will launch in the future. A raffle is being held at the booth to win a coin - the owner of the ticket pulled does not have to be present to win. For those unable to make the trip to Xenia, readers can donate any amount by going to http://www.ariss.org/donate.html

ARISS thanked everyone on the Hamvention staff whose personal efforts are aiding ARISS in its fund-raising and publicity goals.

Rosalie White, K1STO, ARISS-US Delegate for ARRL, added: "We are so pleased and proud to know that Hamvention believes in the ARISS team and its goals of piquing the interest of young people and communities in a quite unique 'wow way' for STEM and Amateur Radio."

About ARISS

Amateur Radio on the International Space Station (ARISS) is a cooperative venture of international amateur radio societies and the space agencies that support the International Space Station (ISS). In

the United States, sponsors are the Radio Amateur Satellite Corporation (AMSAT), the American Radio Relay League (ARRL), the Center for the Advancement of Science in Space (CASIS) and the National Aeronautics and Space Administration (NASA). The primary goal of ARISS is to promote exploration of science, technology, engineering, and mathematics (STEM) topics by organizing scheduled contacts via amateur radio between crew members aboard the ISS and students in classrooms or informal education venues. With the help of experienced amateur radio volunteers, ISS crews speak directly with large audiences in a variety of public forums. Before and during these radio contacts, students, teachers, parents, and communities learn about space, space technologies and amateur radio.

For more information, see www.ariss.org, www.amsat.org, and www.arrl.org.

To receive our Twitter updates, follow @ARISS_status

[ANS thanks ARISS & David AA4KN for the above information]

Satellite Shorts From All Over

+ The AMSAT-NA Office will be closed through Monday, May 21st. The office will reopen on Tuesday, May 22nd

+ AMSAT HQ, @amsat, tweeted some images of the latest "Am-swag" at https://twitter.com/AMSAT/status/997443139760771073

+ Jeff, KE9V, @ke9v, tweeted some images of AMSAT activities at Hamvention here: https://twitter.com/ke9v/status/997528369087631360

+ Burt, FJ8OJ, @fj8oj, has a list of upcoming satellite operations here: https://sat.fg8oj.com/calendar.php (his website has other information of interest to AMSAT members as well)

+ SpaceDaily.com published an article on May 15 which gives nice mention to AMSAT, RadFxSat/Fox-1B: "What Happens After Launch: Two NASA Educational CubeSats" - http://tinyurl.com/AMSAT-RadFX-Fox1B

[ANS thanks SpaceDaily.com for this item]

+ Get on the Satellites for Field Day! Field Day is right around the corner!

Posted on the AMSAT website with the ARRL's permission is an article entitled "Get on the Satellites for ARRL Field Day" written by Sean Kutzko, KX9X, and published in the June 2018 issue of QST. Read it at https://www.amsat.org/get-on-the-satellites-for-field-day/.

As a reminder, AMSAT runs a Field Day event concurrently with ARRL Field Day. For more information, please see https://www.amsat.org/field-day/.

[ANS thanks Paul N8HM for the above information.]

+ EL58: Wyatt, AC0RA, and Clayton, W5PFG, will be activating EL58 on Satellite (FM and linear as W5PFG) between 0000 UTC May 26 and 1700 UTC May 27. In addition to satellite, the team will be active on 6-m SSB and digital modes (FT8, MSK144) with a 5-el Yagi at 10 m height and with 1 kW of power (as AC0RA). Because they will operate from the land portion of the grid, QSOs will count for Louisiana (WAS), Plaquemines Parish (for County Hunters), and IOTA NA-168. Skeds for QSOs >6000 km from the grid are available by contacting

w5pfg(a)arrl.org.

[ANS thanks Wyatt, AC0RA, & Clayton, W5PFG for the above information.]

+ EL60: 6E5RM/XF3 Cozumel Island Special Event. Members of the Radioclub Cancun will be active as 6E5RM/XR3 celebrating the 2018 Rally Maya Mexico on May 23rd and 24th. In addition to 6 m and HF operations, satellite operations are planned. Cozumel Island is IOTA NA-090. QSL via XE3N.

[ANS thanks Ohio/Penn DX Bulletin & dxnews.com for this information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,

This week's ANS Editor,
Peter Laws, N5UWY
n5uwy(a)amsat.org